Seabasing

A Joint Force Enabler
In Area-Denial and Anti-Access Envrionments

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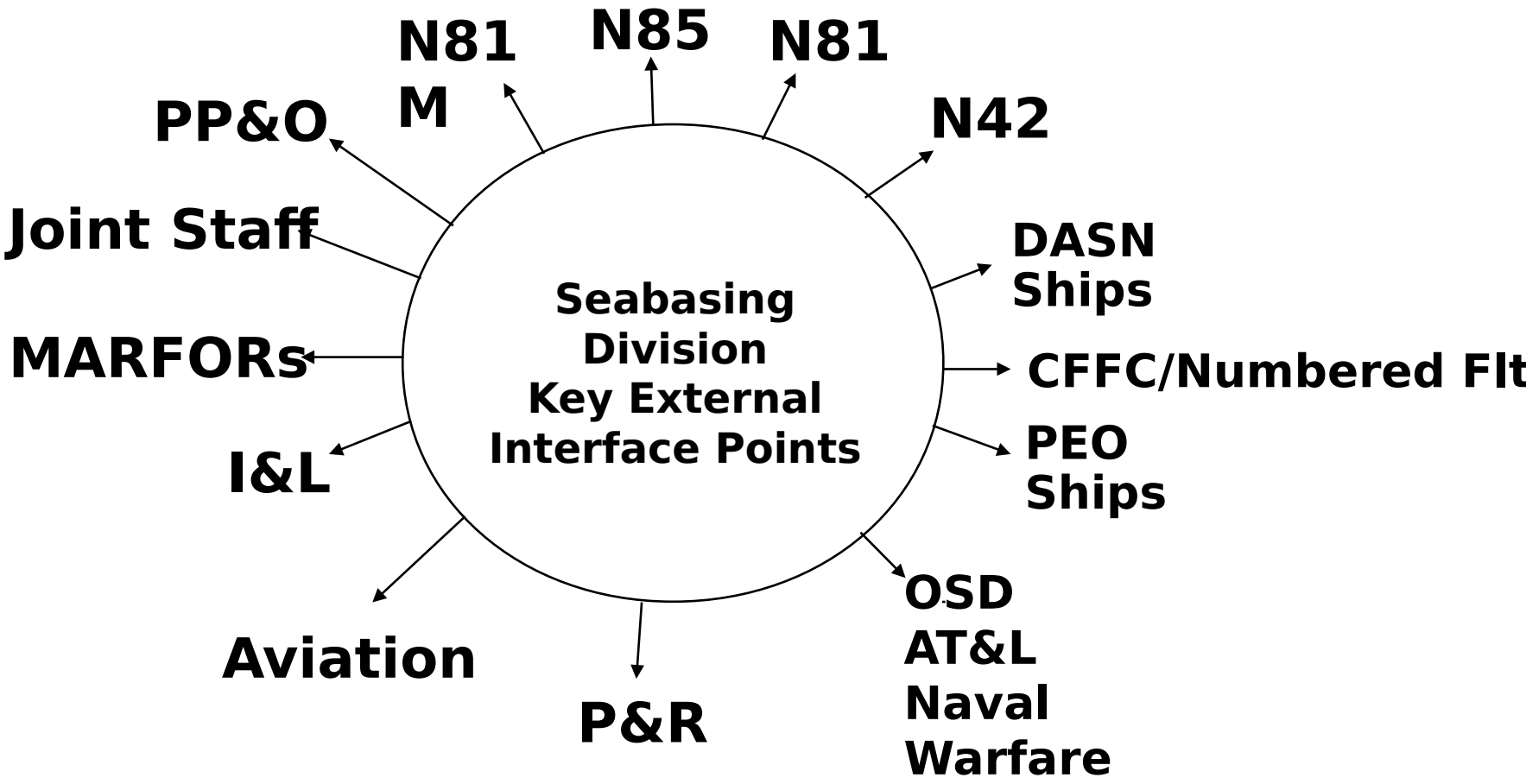
Key Interface Points



Marine Corps Shipbuilding Requirements

Amphibious Warfare Ships

- 30 operationally available ships
  - 10 LHD/LHA(R)
  - 10 LPD-17
  - 10 LSD-41/49 (or equivalent replacement)
- How many ships are needed to meet the total requirement?
  - Average availability is 85% (for planning purposes)
  - Assuming ~1.5 ships are unavailable, it takes 12 to get 10
  - 12 big deck + 12 LPD-17 + 12 LSD-41/49 = 36 total
  - Minimum 11/11/11

Maritime Prepositioning Force (Future)

- One squadron (per May 2005 Acting SecNav/CNO/CMC decision)

Maritime Prepositioning Squadrons

- Retain two squadrons to maintain afloat prepositioned war reserve capacity

Seabasing

- **National capability for global force projection**
  - Exploits sea as maneuver space 365 days a year
- **Enables capabilities of Coalition/Joint Forces**
- **Maximizes the effects of forward presence**
- **Reduces dependence on vulnerable land bases, "steps lightly" on allies and partners**
  - Increased options for the President

"Our forces in the next century must be agile, lethal, readily deployable... We must be able to project our power over long distances, in days or weeks, rather than months"
President G.W. Bush

Background

Seabasing Definitions from Navy-Marine Corps Doctrinal Pub

From NWP 3-62/MCWP 3-31.7, Seabasing

"Seabasing, a national capability, is the overarching transformational operating concept for projecting and sustaining naval power and joint forces, which assures joint access by leveraging the operational maneuver of sovereign, distributed, and networked forces operating globally from the sea."

"The sea base is an inherently maneuverable, scalable aggregation of distributed, networked platforms that enable the global power projection of offensive and defensive forces from the sea, and includes the ability to assemble, equip, project, support, and sustain those forces without reliance on land bases within the Joint Operations Area."

Seabasing Related Doctrine

Marine Corps

- MCWP 3-31, Ship-to-Objective Maneuver (Author's Draft)
- MCRP 3-31B, Amphibious Ships and Landing Craft Data Book (Combine with MCRP 4.113G)
- **MCRP 4-11C, Combat Cargo Operations (Current)**
- **MCRP 4-11.3G, Unit Embarkation Handbook (Current)**

Dual Designated (Navy/Marine Corps)

- **MCRP 3-31A / NWP 3-02.12, Employment of Landing Craft Air Cushion (Current)**
- **MCWP 3-31.5 / NWP 3-02.1, Ship-to-Shore Movement (Current)**
- **MCWP 3-31.7 / NWP 3-62M, Seabasing (Current)**
- **MCWP 3-31.8 / NTTP 3-02.1.4, Defense of the Expeditionary Strike Group (Current)**
- **MCWP 3-32 / NTTP 3-02.3M, Maritime Prepositioning Force Operations (Pending Review)**

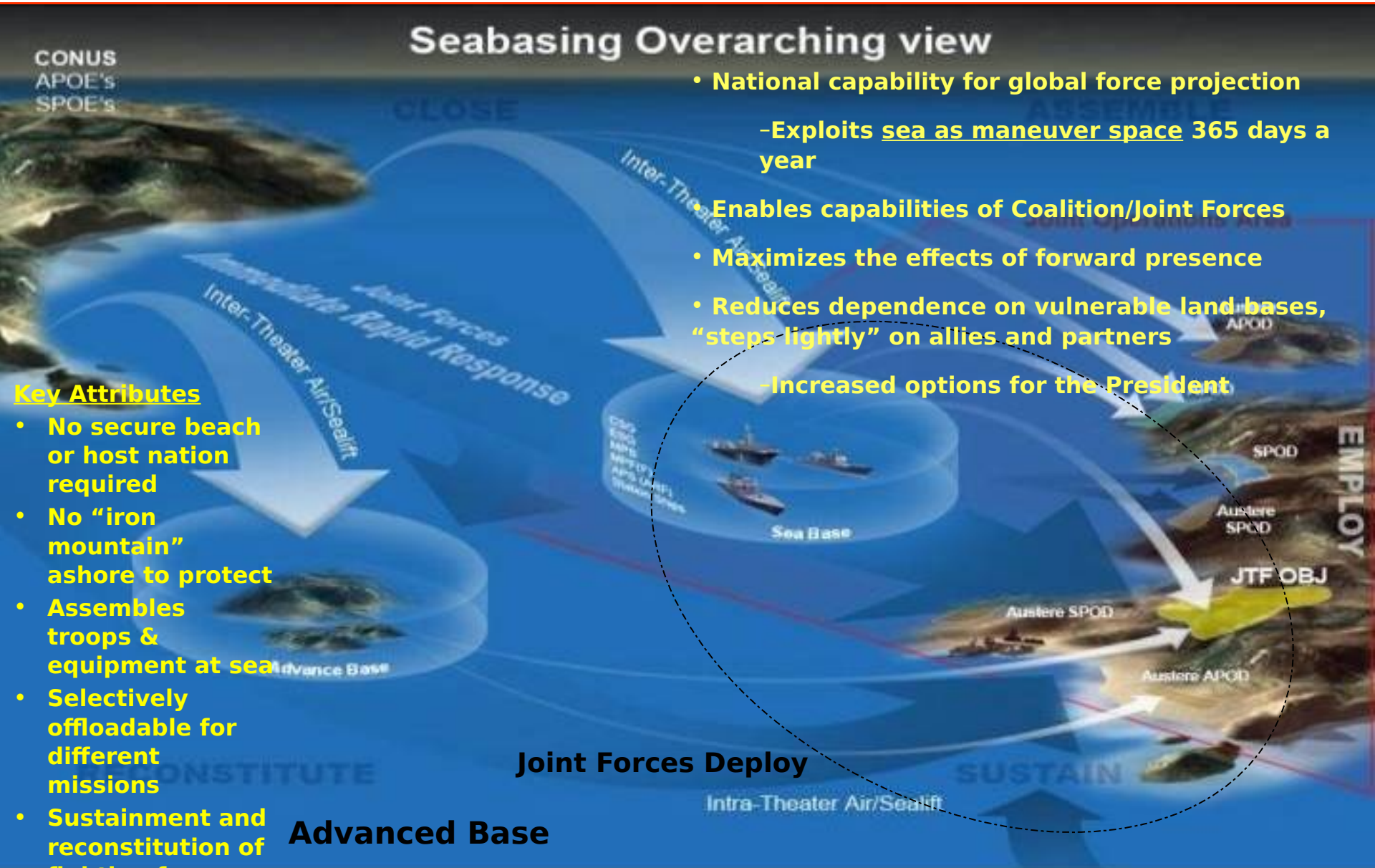
Joint

- JP 3-02, Joint Doctrine for Amphibious Operations (Revision First Draft)
- JP 3-02.1, Joint Tactics, Techniques, and Procedures for Landing Force Operations (Removed from Joint Doctrine hierarchy; consolidate information with JP 3-02.2, proposal pending)
- JP 3-02.2, Joint Tactics, Techniques, and Procedures for Amphibious Embarkation and Debarkation (Consolidate with JP 3-02.1, proposal pending)

NATO

- **Allied Tactical Publication (ATP) 8B Vol. I: Doctrine for Amphibious Operations, Ch. 2 (Ratification Draft)**
- **Allied Tactical Publication (ATP) 8B Vol. II: Tactics, Techniques, and Procedures for Amphibious Operations (Ratification Draft)**

A Joint Force Enabler in Area Denial and Anti-Access Environments

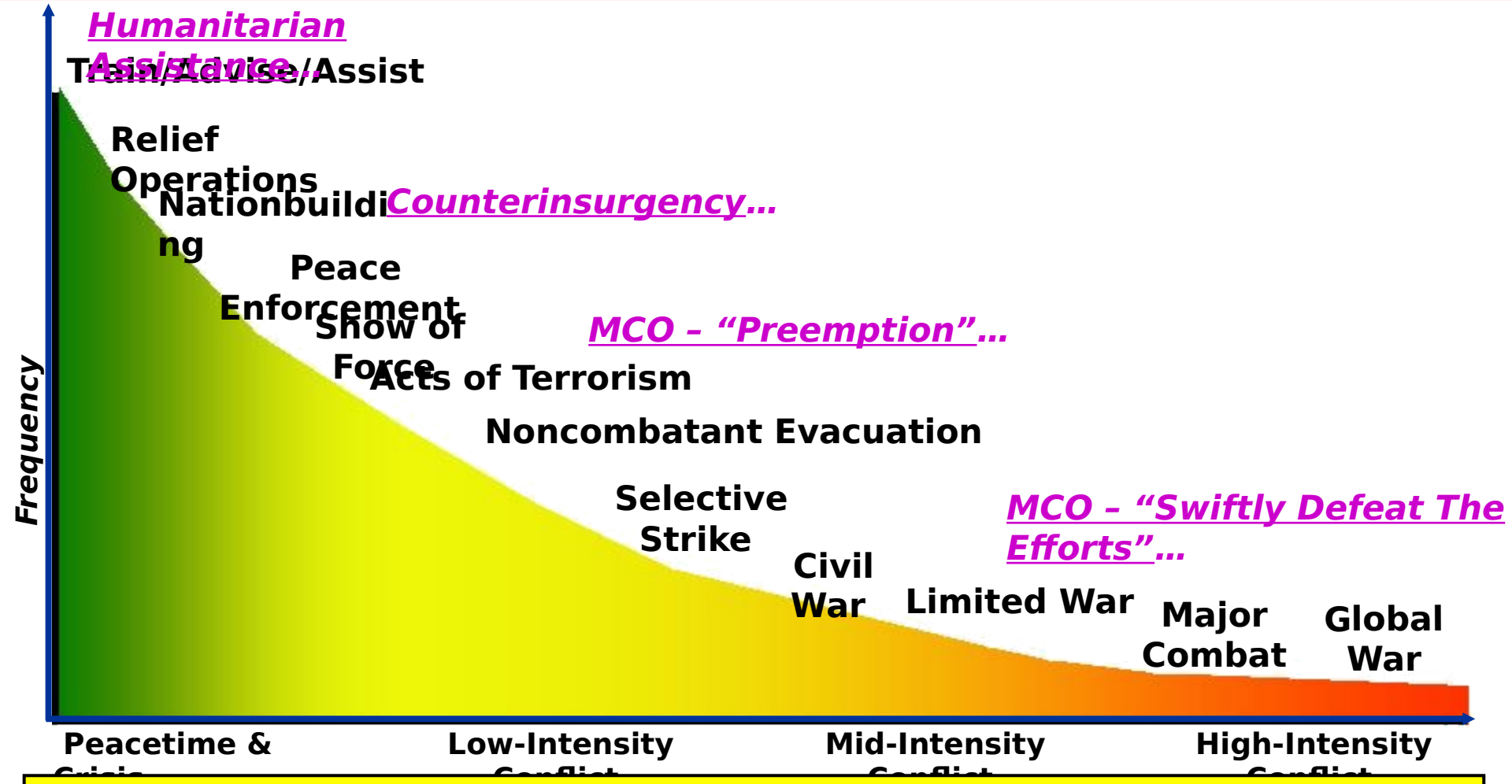


- National capability for global force projection
  - –Exploits sea as maneuver space 365 days a year
- Enables capabilities of Coalition/Joint Forces
- Maximizes the effects of forward presence
- Reduces dependence on vulnerable land bases, "steps lightly" on allies and partners
  - –Increased options for the President

Key Attributes

- No secure beach or host nation required
- No "iron mountain" ashore to protect
- Assembles troops & equipment at sea
- Selectively offloadable for different missions
- Sustainment and reconstitution of

Joint Seabasing: Scalable and Responsive Power Projection



Seabasing will provide…the capability to dissuade a potential adversary… and, if necessary, project joint combat power within reduced timelines… with operational independence of HNS…. *SECNAV, March 05*

What's in the Joint Seabase?

Carrier Strike Group

Expeditionary Strike Group

Maritime Prepositioning Group

Task organized forces to meet COCOM mission requirements

Connectors

Combat Logistics Force Ships

Coalition Force and Sister Service Ships

Seabasing is more than just MPF(F) ...

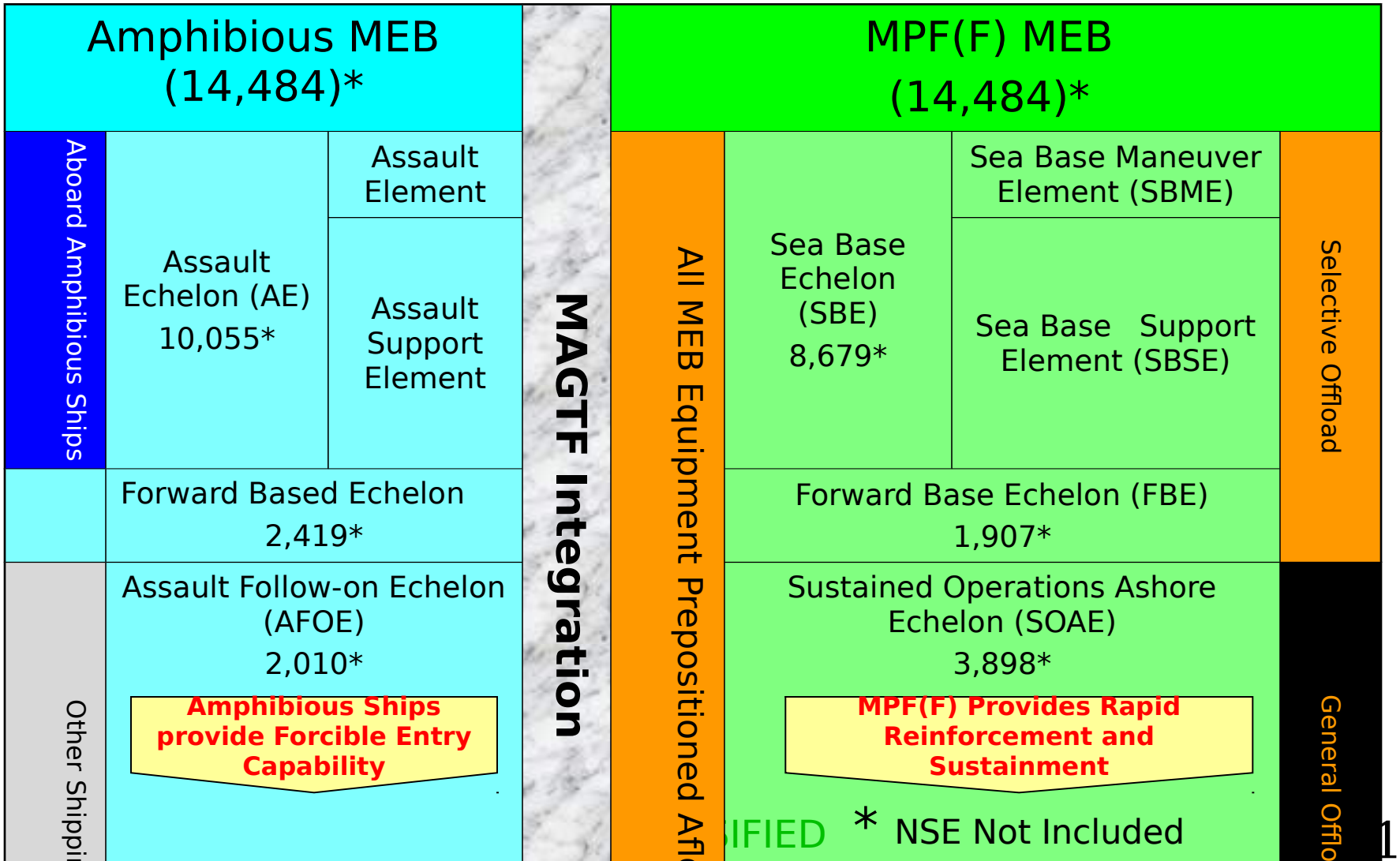
Baseline MEB Organization

(14,484) **Command Element** (769)

Ground Combat Element	Aviation Combat Element	Logistics Combat Element
3 Inf Bn	3 JSF Sqdn (30 F-35B)	CLR (-)
2 Tank Co	1 EA Sqdn	CLB (Rein)
2 LAR Co	1 HMLA Sqdn (18 AH-1Z / 9 UH-1Y)	CLC (FW)
2 AA Co	1.25 CH-53 Sqdn (20 CH-53K)	CLC (RW)
3 Arty Btry	4 VMM Sqdn (48 MV-22)	
1 EFSS Btry	1 KC-130 Sqdn (12 KC-130J)	
1 HIMARS Btry		
2 Cbt Engr Co		
(5,585)	(5,660)	(2,470)

Amphib and MPF(F) Synergy

Organization for Deployment and Employment


Amphibious MEB (14,484)*
MPF(F) MEB (14,484)*
Aboard Amphibious Ships
Assault Echelon (AE) 10,055*
Assault Element
Assault Support Element
Forward Based Echelon 2,419*
Other Shippi
Assault Follow-on Echelon (AFOE) 2,010*
Amphibious Ships provide Forcible Entry Capability
MAGTF Integration
All MEB Equipment Prepositioned Afl
Sea Base Echelon (SBE) 8,679*
Sea Base Maneuver Element (SBME)
Sea Base Support Element (SBSE)
Forward Base Echelon (FBE) 1,907*
Sustained Operations Ashore Echelon (SOAE) 3,898*
MPF(F) Provides Rapid Reinforcement and Sustainment
Selective Offload
General Offlo
IFIED * NSE Not Included

Lift Requirement

MAGTF Combat Systems

DRAFT 10 March 2005

Eagle Eye UAV

VUAV Block 1 (Eagle Eye): provides electronic observation, IR and Airground radar.

UH-1Y

Supports 8 combat loaded troops with a crew of 4. Maximum payload: 3220 lbs. Long range cruise: 135 kts. Maximum Continuous Power speed: 158 kts. Mission radius:130nm with a 2182lb payload. Maximum endurance: 3.3 hrs.

AH-1Z(W)

AH-1Z: Six weapons stations, long range cruise is 134 kts., dive speed: 222 kts., mission radius: 125 nm with a 2900lb payload. Maximum Continuous Power speed: 155 kts. Maximum endurance: 3.3 hrs.

MV-22

MV-22 (Osprey): Self deploy up to 2100 nm with one refueling. Speed :240 kts. Capable of external loads of 10,000 lbs (HMMWV).

HLR

HLR (CH-53X): Capable of 27,000 lbs. To 110nm, while MV-22 loads for sustainment.

Joint Strike Fighter

Joint Strike Fighter: STOVL, operates from L Class/CV and austere sites. Combat radius is 450 nm, air to air and air to ground capable.

CLAWS

Rapidly deployable, all-weather, standoff air defense. Countersurface missiles, fixed and rotary wing aircraft.

JPADS

Highly Accurate, autonomously guided, able to deliver fully rigged bundle weights from 250lbs up to 12000lbs. Being developed to reach a fully rigged bundle weight of 10,000lbs. Gives flexibility to deliver multiple bundles to multiple destinations from one aircraft or multiple aircraft.

Dragon Runner

Small, four-wheeled, man-portable mobile ground sensor designed to increase situational awareness by providing observation of tactical objectives and potential danger areas beyond line of sight where human access is impractical or unsustainable.

Gladiator

Unmanned multipurpose weapon and scouting platform capable of employing the APOBS, M249 SAW and M240G Machine Gun. Future uses payloads may include: non-lethal weapons, communications relay, re-supply, casualty evacuation, or counter sniper employment.

ITV

ITV internally transportable by MV-22, and CH-53E. The vehicle must be designed so that the weapon systems can be employed 60 seconds upon exiting the aircraft and support a 2000 lbs payload.

IFAV

The Interim Fast Attack Vehicle is a high mobility weapons platform based on the Mercedes Benz G-Wagon that provides MEU and selected reconnaissance units with improved ground mobility.

LWPM

The Lightweight Prime Mover is an air transportable, protected vehicle that fits inside a CH53 or under the MV22 aircraft and is capable of towing the M777 howitzer and will accommodate 7-10 battle equipped Marines.

HMMWV(R)

Capability shortfalls in the present HMMWV-A2 fleet are being studied. Areas of concern are: armament, power train, suspension, survivability.

MTVR

Medium Tactical Vehicle Replacement is designed to meet a 70% off-road and 30% on-road load transport requirement. Can carry a 7 ton payload cross-country or a 15 ton load on primary and secondary roads.

LVS(R)

Logistics Vehicle System Replacement. Heavy lift motor transport, capable of 22.5 tons on road, 10.5 tons off road. Capable of handling ISO containers.

FRSS

Employed forward of the surgical company. Rapidly deployable, trauma surgery capable 10 patients/24 hours.

LAV-25

Provides MAGTF with the capability to conduct reconnaissance, security, economy of force, and limited offensive/defensive actions. Service Life Extension underway to improve survivability and extend life to 2015.

EFV

MAGTF's primary mobility during amphibious operations and combat operations ashore. An armored and armored amphibious vehicle capable of transporting Marines from sea base to inland objectives.

MEFFV

MEFFV: in concept, will provide the 2015 and beyond MAGTF to complement the capabilities with a family armored vehicles and armored fighting vehicles of the EFV.

M1A1

MAGTF's heavy armor capability. Firepower Enhancement increases detection range, recognition, target identification, decreases target engagement sequence time, integrates situational awareness systems.

EFSS

Towed, rifled 120mm mortar and internally Transported Vehicle. Fires variety of munitions to greater than 7000 meters. The MEU's heaviest indirect fire system.

LW155

155mm towed howitzer with GPS/INS-aided navigation and positioning will provide high volume, all-weather, indirect fires to almost 40 kilometers and precision to under three meters. It will fire all US 155mm artillery ammunition.

HIMARS

wheeled rocket/missile system capable of firing rockets and missiles in the Multiple Launch Rocket System Family of Munitions to ranges greater than 45 kilometers.

CONDOR

The Command and Control On-the-move Network Digital Over the Horizon Relay (CONDOR) Capability Set supports the Command and Control (C2) joint functional area and will enable forces to maintain data network connectivity beyond line of sight.

IISR

The Integrated Infra Squad Radio (IISR) is a next generation, personal role radio, sustainable, wireless command and control capability that enables the infantry squad leader to communicate with his fire team leaders in complex terrain. ,

ECCS

The Expeditionary Command and Control Suite (ECCS) in HMMWV transportable and enables the MAGTF Commander of an advanced force deployed in a crisis to establish long haul, data/voice communications to maintain situational awareness pictures while moving into theater and once in the Area of Operation.

TSM

The Transition Switch Module (TSM) provides a flexible Unit Level Switch capability using commercial technology to provide Marine maneuver elements with robust voice/data switching, data transport, and bandwidth management capabilities.

TDN

The TDN augments the existing MAGTF communications infrastructure to provide the MAGTF commander an integrated data network, forming the communications backbone for MAGTF tactical data systems and Defense Message System (DMS).

Transformational Communication System

Integrated, network-centric SATCOM system architecture under the oversight of the Transformational Communication Office (TCO). The Advanced Extremely High Frequency (AEHF) satellite system, the Advanced Polar System (APS) and Transformational Satellite (TSAT) will be cross-linked to form an integrated network-centric system-of-systems for wideband and protected users, significantly increasing SATCOM's capacity and utility.

JTRS

The Joint Tactical Radio System (JTRS) Family of Radios will be interoperable with legacy communication systems and capable of growth for new requirements and technologies, forming the tactical extension of the Transformational Communication Architecture (TCA) to access the services of the Global Information Grid (GIG).

MCEITS

MCEITS is the Marine Corps' contribution to meeting DoD Net-centricity environment and infrastructure requirements. MCEITS will position the Marine Corps to leverage the planned capabilities of Joint and DoD programs such as the Global Information Grid Bandwidth Expansion (GIG-BE) and Net-Centric Core Enterprise Services (NCES).

MCEN

The Marine Corps Enterprise Network (MCEN) is the Marine Corps Component of FORCEnet and the Global Information Grid (GIG). MCEN is our enterprise framework for IT and supports all information exchange requirements for Marine warfighters and our supporting establishment.

MAGTF C2

MAGTF C2 will deliver an "end to end," fully integrated, cross-functional MAGTF command and control capability. Spiral development of current C2 programs that include: GCSC, GACE, C2PC, GCSS-MC. Capabilities include, the ability to identify, track, command, and control assigned air, ground, and supporting forces; receive, store, process, and retrieve critical command and control (C2) data infrastructure.

Marine Corps Expeditionary Ship Capabilities

Assault Echelon Shipping

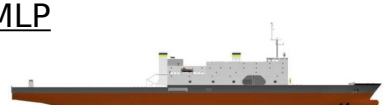
Minimum MEB AE Lift Requirement (15 Ships)

- Five LHD-1 (Wasp Class)
- Five LPD-17 (San Antonio Class)
- Five LSD-41 (Whidbey Island Class)

MPF(F) Program Platforms

2 T-LHA(R)

3 MLP

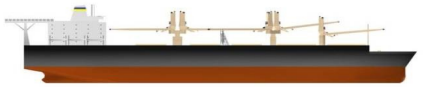


1 T-LHD

3 T-AKE

3 T-AKR

2 Legacy T-AK



Capabilities

Amphibious Warfare Ships

- Inherent survivability, self-defense, and Navy crewing
- Maritime forcible entry operations
- Forward presence, deterrence

Maritime Prepositioning Force (Future) (MPF(F))

- Capable of at-sea arrival and assembly of forces
- Selective offload of equipment sets to meet Seabasing mission requirements
- Supports forward engagement and forcible entry Reinforcement
- ***MPF(F) by design is not assault echelon shipping; therefore, MPF(F) forces are not***

Expeditionary Capabilities

Amphibious Warfare Ships

- 2.0 MEB AE per Strategic Planning Guidance; 15 Ao Ships per MEB AE
- Total 30 operationally available ships
  - 10 LHD/LHA(R)
  - 10 LPD-17
  - 10 LSD-41/49 (or equivalent replacement)
  - Average availability is 85% (for planning purposes)
  - Minimum 11/11/11 ships to meet 30 Ao requirement

Maritime Prepositioning Force (Future)

- One squadron (per May 2005 Acting SecNav/CNO/CMC decision)

Legacy Maritime Prepositioning Squadrons

- Retain two squadrons to maintain afloat prepositioned war reserve

Amphibious Shipping

Platforms

LHA-1 (Tarawa Class) (Last Decom FY18)
LHD-1 (Wasp Class) (Last Decom beyond FY35) LHA-6 (Tarawa Class Rep)
LH(X) (Wasp Class Rep)
LPD-4 (Austin Class) (Last Decom FY13)
*** LPD-17 (San Antonio Class)**
LSD-41 (Whidbey Island Class) (Last Decom FY31)
LSD-49 (Harpers Ferry Class) (Last Decom FY31)
LCC-19 (Blue Ridge Class) (Last Decom FY16)

*** Functionally replace LPD 4, LSD 36, LKA 113, and LST 1179 and LCC Ship classes**

Capabilities

Amphibious Warfare Ships

- Inherent survivability, self-defense, and Navy crewing
- Assault echelon shipping; capability to cohesively employ surface and vertical AE elements/units in anti-access environment
- Maritime forcible entry operations
- Forward presence, deterrence

Platforms

New Build Assault Echelon Shipping

- LPD-17
- LHA(R)
- LH(X)
- LSD(X)
- JCC(X)

Amphibious Lift Enhancement Prog (ALEP)

Assault Follow On Echelon (Shipping)

- T-AVB

Expeditionary Requirements

Amphibious Warfare Ships

- 2.0 MEB AE per Strategic Planning Guidance; 15 Ao Ships per MEB AE (minimum)
- Total 30 operationally available ships (POR is 9/9/12)
  - 10 LHD/LHA(R)
  - 10 LPD-17
  - 10 LSD-41/49 (or equivalent replacement)
  - Average availability is 85% (for planning purposes)
  - Minimum 11/11/11 ships to meet 30 Ao requirement

LHA-1 Tarawa Class
(Amphibious Assault Ship - General Purpose)

Platform

Description

Displacement (Full)	**39,925 t**
Speed	**24 kts**
Length	**820 ft**
Beam	**106 ft**
Draft	**26.0 ft (limit 27 ft)**
Crew	**82 Officers/956 Enlisted**
Marine Detachment	**172 Officers; 59(>E7); 1,672 (<E6) (0 Surge)**
Med Capability	**4 Med OR; 17 ICU; 48 Ward; 4 Isolation Ward**
Surface Interface Well	**1 (1-LCAC; 4-LCU)**
Flight Deck	**9 CH-53K Spots**
Elevators	**1 Deck Edge (20 t); 1 Stern (40 t)**
Hangar Bay/High Bay	**18,519 ft2 / 4 Frame High Bay (28 ft)**
Vehicle Square	**28,700 ft2**
Cargo/Ammo Cube	**156,000 ft3**
Cargo Fuel (JP-5)	**407,600 gal**

Program Status

- **Amphibious Assault Ship project power, transport troops by sea and air to a land battle, provide an "Over the Horizon" strike capability, and maintain presence, by serving as the cornerstone of the Amphibious Readiness Group (ARG) / Expeditionary Strike Group (ESG).**
  - LHA-1 USS Tarawa; Comm 29 May 76, home San Diego, CA
  - LHA-4 USS Nassau; Comm 28 Jul 79, home Norfolk, VA
  - LHA-5 USS Peleliu; Comm 3 May 80, home San Diego, CA
- **Compliments the MEU, legacy composite ACE (6 AV-8, 12 CH-46E, 4 CH-53E, 4 AH-1W, 3 UH-1N, and 2 H-60 SAR) .**
- **Decommissioning approaching FY09, FY15, FY18.**
- **Incapable to support F-35B.**
- **Deck edge elevator not capable for CH-53K.**
- **Incapable to support full compliment of future MEU ACE; capable to support following mixes:**
  - 12 MV-22, 4 CH-53, 7 H-1, 2 H-60
  - 9 MV-22, 6 CH-53, 8 H-1, 2 H-60
  - 11 MV-22, 6 CH-53, 6 H-1, 2, H-60
  - 10 MV-22, 4 CH-53, 3 H-1, 6 AV-8, 2 H-60
- **LHA replacement has no Well; possible LH(X) design to regain.**

UNCLASSIFIED

LHD-1 Wasp Class
(Amphibious Assault Ship - Multipurpose)

Platform

Program Status

- **Amphibious Assault Ship project power, transport troops by sea and air to a land battle; provide an "Over the Horizon" strike capability, and maintain presence, by serving as the cornerstone of the Amphibious Readiness Group (ARG) / Expeditionary Strike Group (ESG).**
  - LHD-1 USS Wasp; Comm 6 Jul 89, home Norfolk, VA
  - LHD-2 USS Essex; Comm 17 Oct 92, home Sasebo, Japan
  - LHD-3 USS Kearsarge; Comm 16 Oct 93, home Norfolk, VA
  - LHD-4 USS Boxer; Comm 11 Feb 95, home San Diego, CA
  - LHD-5 USS Bataan; Comm 20 Sep 97, home Norfolk, VA
  - LHD-6 USS Bonhomme Richard; Comm 15 Aug 98, San Diego,CA
  - LHD-7 USS Iwo Jima; Comm 25 Mar 00, home Norfolk, VA
  - LHD-8 USS Makin Island; Comm plan April 2009 in San Diego, CA

Description

Displacement, Full (LHD)	**40,650 t (1-4); 40,358 t (5-7); 41,772 t (8)**
Speed	**20+ kts**
Length	**844 ft**
Beam	**106 ft (200 ft w/flight elevator extended)**
Draft	**27.0 ft (Full Load)**
Crew	**104 Officers/1004 Enlisted**
Marine Detachment	**1,687 troops; 184 surge**
Med Capability	**6 Med OR; 17 ICU; 47 Ward (casualty elevator)**
Surface Interface Well	**1 (3-LCAC or 2-LCU)**
Flight Deck	**9 CH-53K Spots**
Elevators	**1 Port (37 ½ t); 1 Starboard (37 ½ t)**
Hangar Bay / High Bay	**23,980 ft2 / 5 Frame High Bay (35 ft)**
Vehicle Square	**29,928 ft2**
Cargo/Ammo Cube	**124,596 ft3**
Cargo Fuel (JP-5)	**617,000 gal**

Issues

- **Program of Record is for 8, a loss of 1 in FY22 to MPF(F).**
- **Growing Ground (Up-Armor, MRAP, JLTV) requirements exceed operational capacity of ship.**
- **Aviation (MV-22/JSF) requirements encroach operational flexibility and capacity of ship.**
- **LHD 1-5 exceed displacement (KG) limits and require Oil Compensation Modifications in order to house growth of future Aviation (Osprey/Joint Strike Fighter)**
- **Ship Alterations to accommodate MV-22B/F-35B.**
- **Deck Heating and environmental affects (MV-22B/F-35B)**

LHA-6 Class
(Amphibious Assault Ship)

Preliminary Design Platform

LHA-6

Description

Displacement, Full (LHD)	**44,971 lt**
Speed	**22.2 kts**
Length	**844 ft**
Beam	**106 ft**
Draft	**28.82 ft (Full Load)**
Crew	**102 Officers; 78 SNCO; 1024 Enlisted**
Marine Detachment	**1,687 troops; 184 surge**
Med Capability	**2 Med OR; 24 Ward**
Surface Interface Well	**0**
Flight Deck	**9 CH-53K Spots**
Elevators	**1 Port (37 ½ t); 1 Starboard (37 ½ t)**
Hangar Bay / High Bay (49 ft)	**30,542 ft2 / Two 7 Frame High Bay**
Vehicle Square	**19,112 ft2**
Cargo/Ammo Cube	**145,963 ft3**
Cargo Fuel (JP-5)	**1,300,000 gal**

Program Status

- **LHA 6 (LHA(R) Flight 0), a transformational ship to replace the LHA 1 class of amphibious assault ships.**
  - Will have the flexibility to operate in the traditional role as the flagship for an ESG as well as potentially playing a key role in the MPF(F); provides the flexibility to operate and be a vital part of the Sea Base.
- **Program to enhance amphibious aviation capability-meet increased demand created by JSF-MV22.**
  - Compliments the MEU, 1:1 Future composite ACE (6 F-35B, 12 MV-22B, 4 CH-53K, 4 AH-1Z, 3 UH-1Y, and 2 MH-60 SAR)
  - Or a JSF platform to host 22 F-35B aircraft.
- **LHA-6/7/8 planned w/o well-deck**
  - Procurement of LHA-7 (FY10) and LHA-8 (FY14) are

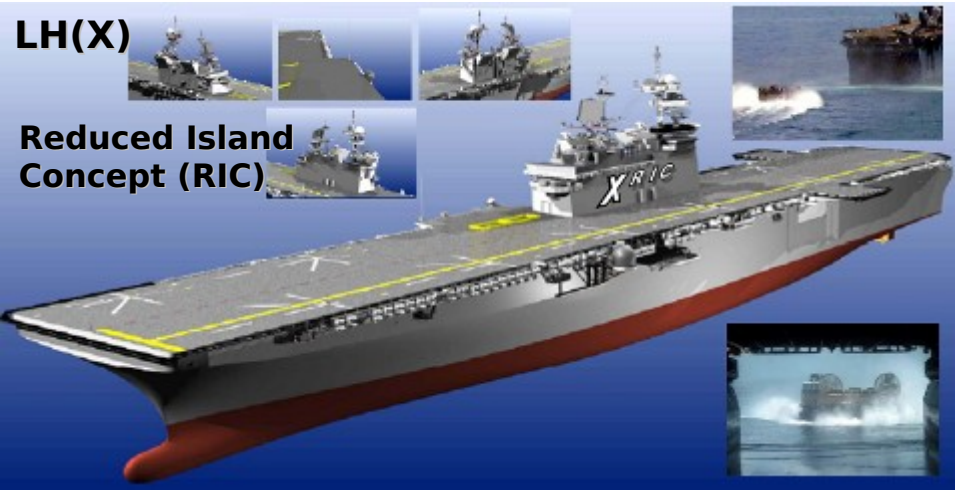
Issues

- **LHA-7 design decision (RIC & Well Deck) pending for FY-10 ship. Ship will be an MPF(F) big deck.**
- **Expeditionary Role as Amphibious Warfare Ship to support the Strategic Planning Guidance and providing Operational Availability (Ao) to support 2.0 MEB Assault Echelon (i.e. 10 LHD/LHA(R)).**

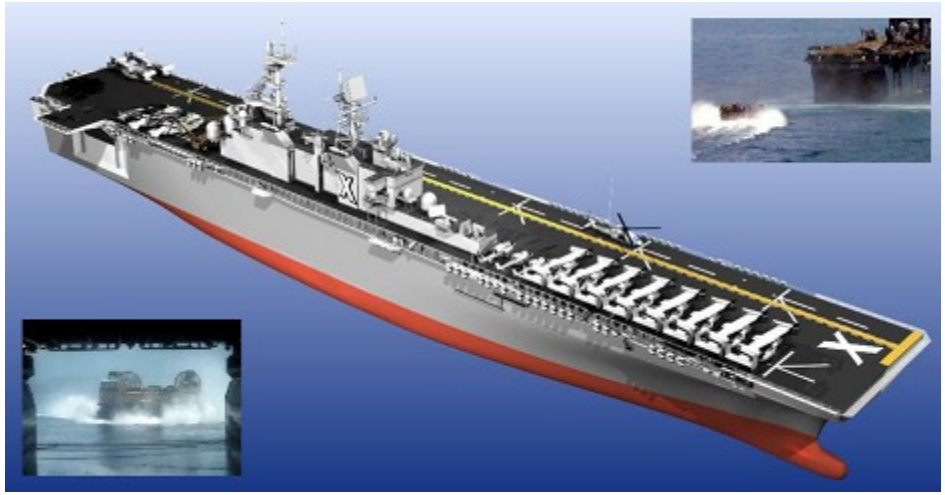
LH(X)

"Systematic approach to an enduring requirement"

Concept Platform



Concept Platform



Program Status

- **Program to enhance amphibious capability and bring back what was learned with LHA 6 design.**
- **Meet increased demand of MAGTF growth and demand created by JSF-MV22-CH53K.**
- **LH(X) is slated for an FY24 procurement**
  - **FY29 Operational**

Issues

- **Goal for LH(X) will be designed to reincorporate the Well Deck, and retain as much of the aviation enhancements achieved from LHA(R) as possible (expanded hangar/high bay, space arrangements)**
- **RIC: Part of "spiral design" concept**
  - **Eliminates need for flight restrictions on spot 5 & 6 increasing clearance btw A/C and ship's island; MV-22 currently cannot land on spots 5 & 6 on the LHD and LHA-6**
  - **Increases deck capacity 20% over LHA-6 (9 more H46 equivalent spots) which equates to an increase to the standard MEU ACE:**
    - **4 more MV-22B or**
    - **3 more F-35B or**

LPD-4 Austin Class
(Amphibious Transport Dock)

Platform

Description

Displacement (Full)	**16,905 t**
Speed	**21 kts**
Length	**569 ft**
Beam	**105 ft**
Draft	**23.0 ft (Full Load)**
Crew	**492**
Marine Detachment	**68 Officers;21(>E7); 620(<E6)**
(176 Surge) Med Capability	**1 Med OR; 4 Isolation ward; 8 Primary care ward beds**
Surface Interface Well	**1 (1 LCAC or 1 LCU)**
Flight Deck	**2 Ops Spots/4 Exp Spots**
Hangar Bay	**1 MV-22 or CH-53K**
Vehicle Square	**14,000 ft2**
Cargo Cube	**51,000 ft3**
Cargo Fuel (JP5)	**288,700 gal**

Program Status

- **Thee *Austin*-class provides substantial amphibious lift for Marine troops and their vehicles and cargo. Serves as the secondary aviation platform for ESG.**
  - LPD-7 USS Cleveland; Comm 3 April 67, San Diego, CA.
  - LPD-8 USS Dubuque; Comm 21 Aug 67, home San Diego, CA.
  - LPD-9 USS Denver; Comm 18 Oct 68, home San Diego, CA.
  - LPD-10 USS Juneau; Comm 7 Jul 69, Sasebo, Japan
  - LPD-12 USS Shreveport; Comm 1 Dec 70, home Norfolk, VA.
  - LPD-13 USS Nashville; Comm 26 Dec 69, home Norfolk, VA.
  - LPD-14 USS Trenton; Comm 12 Feb 71, home Norfolk, VA.
  - LPD-15 USS Ponce; Comm 25 Jun 71, home Norfolk, VA.
- **Compliments the MEU ACE; simultaneously land/launch (2) CH-53/MV-22; expanded flight deck operates (4) H-1's or (2) H-1's & (1) H-46.**

Issues

- **The oldest of the class turned 40 this year, and ship is being replaced with the San Antonio Class (LPD-17).**
- **Decommissioning:**
  - FY07 - USS Ogden (LPD-5), USS Shreveport (LPD-12), USS Trenton (LPD-14).
  - FY09 - USS Juneau (LPD-10).
  - FY10 - USS Cleveland (LPD-7), USS Nashville (LPD-13).
  - FY12 - USS Debuque (LPD-8), USS Ponce (LPD-15).
  - FY13 - USS Denver (LPD-9).
- **Possible ALEP ships.**

UNCLASSIFIED

LPD-17 San Antonio Class
(Amphibious Transport Dock)

Platform

Description

Displacement (Full)	24,900 lt
Speed	24.5 kts
Length	684 ft
Beam	105 ft
Draft	23.0 ft (Full Load)
Crew	360 Sailors /3 Marines
Troop Lift	66 Officers; 41 (>E7); 597 (<E6);
95 Surge	
Med Capability	2 Med OR; 4 Isolation Ward;
	24 Bed Wards & Casualty Overflow
Surface Interface Well	1 (2 LCAC or 1 LCU); 14 EFV
Flight Deck	2 Ops Spots/4 Exp Spots
Hangar Bay	1 MV-22 or CH-53K
Vehicle Square	25,000 ft2
Cargo Cube	35,000 ft3
Cargo Fuel (JP5)	215,000 gal

Program Status

- **LPD 17 Commissioned, 14 Jan 2006, Home ported in Norfolk, VA**
- **LPD 18 Commissioned 5 March 07, Home ported in San Diego**
- **LPD 19 successfully completed Acceptance Trials Sept. 07**

Functionally replace LPD 4, LSD 41, LKA 113, LST 1179 and LCC Ship classes

Issues

- **Program of Record is for 12 ships but only 9 are currently funded.**
- **9th ship (LPD-25) to be delivered in FY-12**
- **Based on current and projected lift requirements, USMC may seek to purchase additional ships (10-11)**
- **Marine Corps requires a 10th LPD 17 to meet 2.0 MEB of Lift, #1 on USN FY08 unfunded list**
- **LPD-17 hull form may be used for JCC(X) and LSD(X) platforms based on Navy Single Hull initiative.**

LSD-41/49 Class
(Dock Landing Ship)

Platform

LSD-48

Description

	LSD-41	LSD-49
Displacement (Full)		15,939 t 16,740 t
Speed		20+ kts
Length	609 ft	
Beam	84 ft	
Draft (Full)	20 ft	
Crew	22(O); 391(E)	
Troop Lift	27(O); 375(E); 102Surge.	27(O); 380(E); 101Surge
Med Capability	1 OR; 1 POR, 7 ward beds.	
Surface Interface	1 (4 LCAC or 3 LCU)	1 (2 LCACs or 1)
Flight Deck	2 Ops Spots	
Vehicle Square	11,831 ft2	20,200 ft2
Cargo Cube	8,970 ft3	67,600 ft3
Cargo Fuel (JP5)	53,000 gal	50,600 gal

Program Status

- **The LSD transports and launches amphibious craft and vehicles with their crews and embarked personnel in amphibious assault operations.**
  - **LSD-41 USS Whidbey Island**
    - **Commissioned 9 Feb 85.**
  - **LSD-42 USS Germantowen**
  - **LSD-43 USS Fort McHenry**
  - **LSD-44 USS Gunston**
  - **LSD-45 USS Comstock**
  - **LSD-46 USS Tortuga**
  - **LSD-47 USS Rushmore**
  - **LSD-48 USS Ashland**
  - **LSD-49 USS Harpers Ferry**
  - **LSD-50 USS Carter Hall**
  - **LSD-51 USS Oak Hill**
  - **LSD-52 USS Pearl harbor**
- **LSD-41 was designed specifically to operate LCAC vessels, the largest capacity for these landing craft of any U.S. Navy amphibious platform.**
- **The LSD-49 is the cargo variant, with its well**

Issues

- **Program of Record is 12 ships.**
- **First Decommissioning is FY23, last one FY35.**
- **LPD-17 is the likely candidate for LSD(X).**
- **LSD(X) procurement to begin FY18, with first delivery FY23.**

JCC(X)
(Joint Command and Control Ship)

Description

Program Status

- **JCC(X) is a mobile, self-sustaining maritime platform with robust C4ISR capability ISO a Joint Force Commander and staff that provides in-theater afloat command and control.**
- **Although cancelled in 2003, this program now has an RDT&E budget of 52.4M as per Congressional Budget Item Justification dated Feb. 2007**
- **Budgeted funds will fund JCC(X) related ICD, CD, AOA, CDD and other JCC(X) preliminary design and feasibility study efforts necessary to obtain a Program Decision to proceed with functional**

Background

- **The Navy currently operates four dedicated command ships, which also serve as the flagships for four of the five numbered fleet commanders:**
  - USS Lasalle (AGF-3) - COMSIXTHFLEET
  - USS Blue Ridge (LCC-19) - COMSEVENTHFLEET
  - USS Mount Whitney (LCC/JCC-20) - COMSECONDFLEET
  - USS Coronado (AGF-11) for COMTHIRDFLEET
- **The current ships have been in service for 33 to 40 years.**

Issues

- **JCC(X) vice LCC(R) - Landing Command and Control may garner a higher BISOG bill that could migrate to other AE platforms**
- **After this program was killed (unfunded) in 2003, SID has had minimal involvement in discussions regarding JCC(X) capabilities and requirements.**
- **Given the renewed commitment to this program, SID has reengaged N86 the Resource Sponsor.**
- **Initial direction from OPNAV is to use LPD 17 as a common hull form for future Amphibious**

AFOE
(Assault Follow On Echelon Shipping)

Platform

Description

AFOE: In amphibious operations, that echelon of the assault troops, vehicles, aircraft, equipment, and supplies that, though not needed to initiate the assault, is required to support and sustain the assault. In order to accomplish its mission, it is normally required in the objective area no later than five days after commencement of the assault landing.

Program Status

- **Based on the level of effort required to determine AFOE shipping requirements, MCCDC requested N42 co-lead a formal study.**
- **N42 disagreed with formal study and "stated the Marine Corps should provide the lift requirement to Navy and then Navy would analyze the types of vessels needed to meet the transportation solution. "**
- **N42 goal is to complete the transportation analysis by Nov 07.**
- **Delay providing a response until recalibration of the Baseline MEB and solidification of the**

Issues

- **N42 requested MCCDC provide AFOE Requirement**
- **Without a definitive AE (PR 09 Ship Building Plan) no clear determination of an AFOE requirements can be made**
- **The Baseline MEB is scheduled to be recalibrated based on current Armoring Strategy will drive inaccurate AFOE demand signal.**
- **USTC is divesting RRF vessels that would meet this demand.**

T-AVB
(Aviation Maintenance Logistics Ship)

Platform

Description

Displacement	**23,800 lt**
Speed (80% power)	**18 kts**
Length	**602 ft**
Waterline	**560 ft**
Beam	**90 ft**
Draft	**34.0 ft; (Full Load: 29.8 ft)**
Crew	**41 (Commercial U.S. Merchant**
Troop Lift	**25 Officer/SNCO; 300 Enlisted**
Cargo Cube (TEUs)	**608 8'x8'x20' Containers**
In IMA mode	**300 MFs & 52 Access Modules**
Flight Deck	**1 MV-22 or CH-53K (Level 2/Class 3)**

Program Status

- **Provide a dedicated sea-lift for the rapid movement of the aviation intermediate level (I-level) maintenance capability to sustain fixed and rotary-wing aircraft.**
- **Provide strategic lift in a conventional container or Roll-On/Roll-Off (RO/RO) configuration**
- **Provides selected, sea-based expeditionary logistics support to a MAGTF ACE.**
- **Each T-AVB carries the equivalent of 140 C-141 lifts required to deploy a Marine Aviation Logistics Squadron (MALS) to a crisis area.**
- **SS Wright (T-AVB-3) comm 1 May 86, berthed in Baltimore, MD**
- **SS CURTIS (T-AVB 4) comm 18 Aug 87, berthed in San Diego, CA**
- **Maintained in five day Reduced Operating Status-5 (ROS-**

Issues

- **The SS Wright (T-AVB 3) and the SS Curtiss (T-AVB 4) were originally built in 1970 and 1969 with a designed life of 50 years. Continual upgrades and enhancements have maintained these assets as a valuable mechanism by which Marine Aviation deploys and employs its Logistics Support Concept to support the AFOE.**
- **T-AVB usable life expires 2019 and 2020**
- **Role and Requirement in MALS Future**

ALEP
(Amphibious Lift Enhancement Program)

Platform

Capability

- **The present inventory of amphibious shipping provides ~ 549,900 square feet of vehicle lift capacity.**
- **Current amphibious inventory, and that projected through FY-13, does not meet the current MEB lift requirement of ~600K square feet of vehicle lift.**

Program Status

- **ALEP is designed to fill the gap in vehicle square feet stowage until the LPD-17 class is delivered.**
- **ALEP IS USED TO AUGMENT THE 2.0 MEB lift requirement.**
- **The current ALEP consists of five LKAs and four LSTs, providing a total of 201,000 square feet of vehicle lift capacity.**
- **Projections indicate that to pull a single hull out of ALEP will require $50M and 2 years to make the ship seaworthy (w/o crew costs).**

Issues

- **Total amphibious ships (30-32), of which 85% are available at any given time, does not meet the 2.0 MEB AE lift requirement.**
- **ALEP does not have responsive and capable lift capacity, and increases risk and will result in MAGTF capabilities left behind.**
- **USN FMS is looking to sale (authority) two LST's out of ALEP in FY-09. Replacement may include LHA-1 and/or an LPD-4 decommissioning.**
- **January 2008 ALEP Tour.**

LCS
(Littoral Combat Ship)

Platform

Capability

Speed	**~45 kts - sprint**
Length	**~419 ft**
Beam	**~100 ft**
Draft	**~14 ft (non-full load)**
Crew	**~ 50 Sailors**
Troop Lift	**~ 25 pax**
Flight Deck	**1 – MV-22 or CH-53**
Hangar Bay	**Type variant – 1 or 0**
Propulsion	**Multiple types (turbine, diesel, waterjet, thruster)**
Mission Packages	**Mines (MIW)**
	Small fast surface craft (SUW)
	Shallow diesel submarines (ASW)

Program Status

- **The LCS - a fast, maneuverable, shallow draft, rapid, reconfigurable, single mission focus with advanced unmanned vehicles, a multiplier to the Naval and Joint Force.**
- **Provides operational flexibility for a sea superiority and assured access, off-board distributed sensor network, and an integral member of future surface combatant family of ships.**
- **Accelerated Schedule:**
  - **2 Jun 05 – Lay keel for USS Freedom (LCS-1)**
  - **14 Oct 05 Excercised 2nd detailed design & construction (LCS-2)**
  - **19 Jan 06 Lay keel for USS Independence (LCS-2)**
  - **26 Jun 06 Excercised construction option for LCS-3**
  - **23 Sep Launch LCS Freedom (LCS-1)**
- Original cost estimate per LCS was $220M. Current projected cost per LCS is $460M. Despite cost increases, the number of LCS hulls have remained consistent at 55. Without increasing congressional funding, USN could reduce funding in other ship programs to pay

Issues

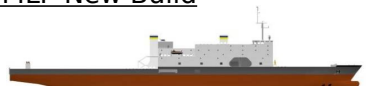
- **Every 2 LCS hulls is the same cost as an LPD17 hull with the LPD 17 more operationally flexible with greater mission payload capacity, draft, signature and crewing not with standing.**
- **USMC has monitored but not been an active participant in the development of the LCS program.**
- **Development of MCO, LCO and GFS excursions has drawn USMC interaction with LCS with possible USMC requirements.**
- **Multiple PM's for LCS – PMS-501(hull), PMS 420(msn modules) and a lack of a clearly defined NAVAL CONOPS are a challenge.**
- **(looking for a USMC requirement?) Possible LCS Landing Force Mission Modules would require participation of MARSOC/USMC Reconnaissance elements. This module is not currently planned for nor funded**
- **Should USMC engage LCS program for future manpower and funding (risks) requirements, possible AE/MPF(F) tax**

MPF(F)
(Maritime Prepositioning Force (Future))

Platform

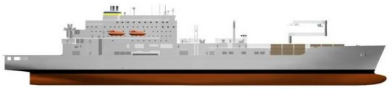
2 T-LHA(R) New Build

3 MLP New Build



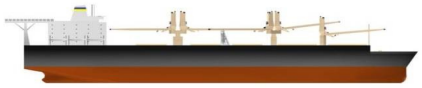
1 T-LHD

3 T-AKE New Build



3 T-AKR New Build Modified

2 Legacy T-AK



Description

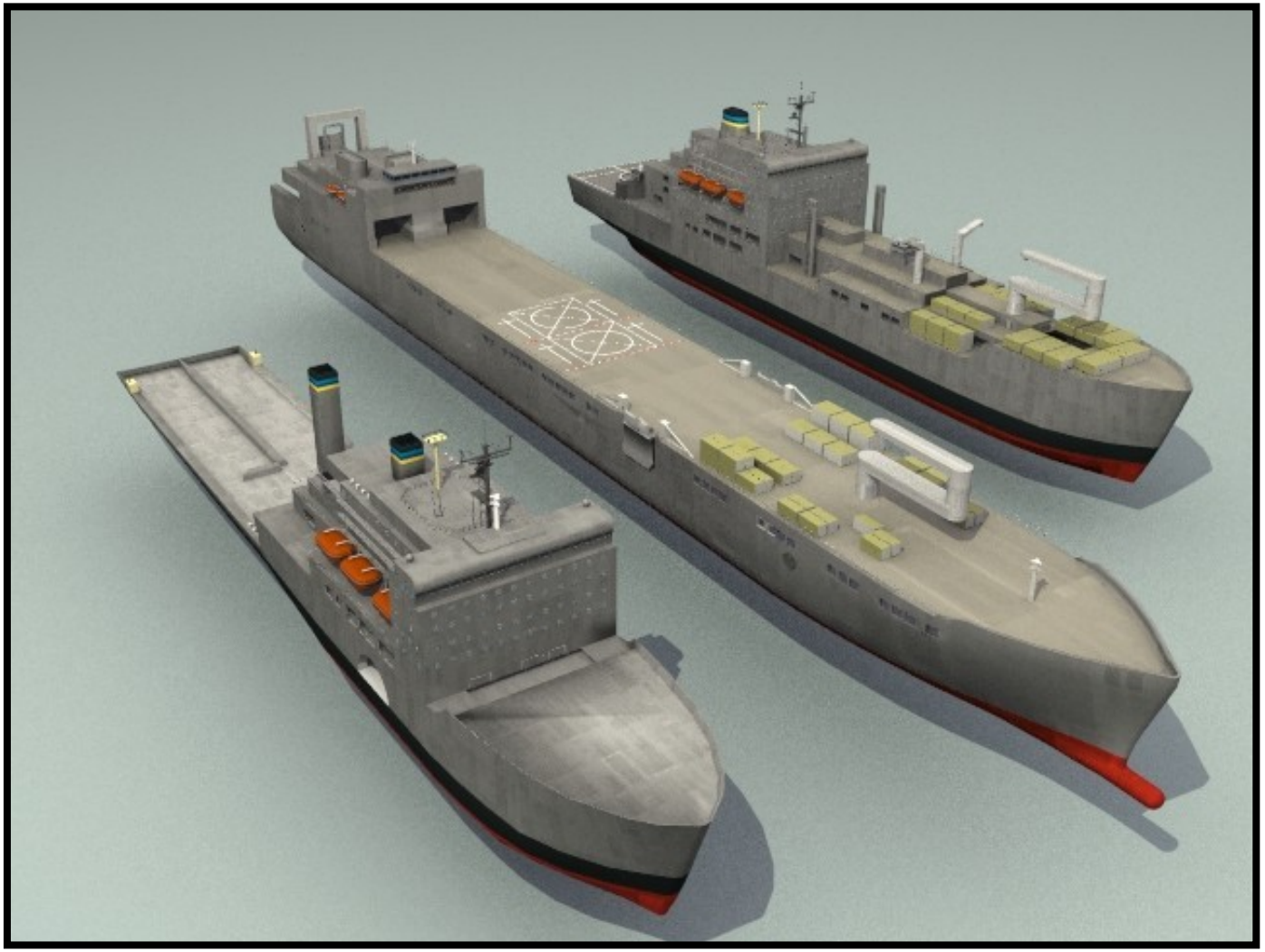
- **Capable of at-sea arrival and assembly of forces**
- **Selective offload of equipment sets to meet Seabasing mission requirements**
- **Supports forward engagement and forcible entry**
- **MPF(F) Shipping will not count as AE Shipping**
- ***MPF(F) by design is not assault echelon shipping, therefore, MPF(F) forces are***

Program Status/Issues

- **CDD Incremental Development**
  - **1 MLPs and T-AKEs**
    - R3B 9 Nov 2007
    - JROC January 2008
  - **2 Big Decks**
    - Begins staffing Dec 07
    - R3B April 07
    - JROC Jun/Jul 07
  - **3 LMSRs – Begins staffing 1st Qtr 09**
- **Program of Record is for 14 ships last ship FY20**
- **IOC (FY17), FOC (FY20)**
- **LHD/T-AKs (MSC/MPF) (3) platforms from existing ships**

Concept of Employment

Maritime Prepositioning Force- (Future)



MPF(F) BLUF

What's been done?

- 5 May 05 SECNAV approved Squadron Composition (2-1-3-3-3-2)
- MROC Established Future MEB Baseline
- Concept Of Employment (OMFTS / STOM / OTH/Sea Basing JIC)
- 2 March 06 CDD introduced into JCIDS
- 6 October 06 CNO Signed CDD

Where are we now?

- 7 Dec 06 Established Amphibious and Prepositioning Requirements
- 04 Jan 07 CDD Held at JROC
- Experimentation / Demonstration
- N81-DC CD & I Joint Sea Basing Study
    - WBB 3 COA (s) POP Sept 07

What's next?

- CDD Increment 1 JROC ~15 Jan 08
- Continue Experimentation/Demonstrations
- FY 10 Milestone "B"
- Transition Planning – Legacy to MPF(F)
- IOC FY 17 – FOC FY 22

MPF(F) Squadron Required Capabilities

- ✓ Preposition the MEB (1 Air and 2 Surface Battalions [selective offload])
- ✓ Close a MEB in 10-14 days
- ✓ At Sea Arrival and Assembly in 24-72 Hours
- ✓ Employ one Surface Battalion and one Vertical Battalion in 8-10 hours
- ✓ Provide accommodations and aircraft/vehicle maintenance capability (O level/selected I level) for a MEB
- ✓ Sustain the forces ashore from the Sea Base
- ✓ Provide Level II (resuscitative surgery) medical support
- ✓ Accommodate and operate organic surface connectors
- ✓ Conduct external operations in Sea State 3 threshold/Sea State 4 objective
- ✓ Provide MEB C2

<u>2015 MEB assumptions</u>

11,912	Personnel
799	HMMWVs
106	EFVs
335	MTVRs
30	M1A1 Tanks
18	LW 155 Howitzers
1,226	Trailers and others

<u>2015 R/W/T/R MEB ACE</u>

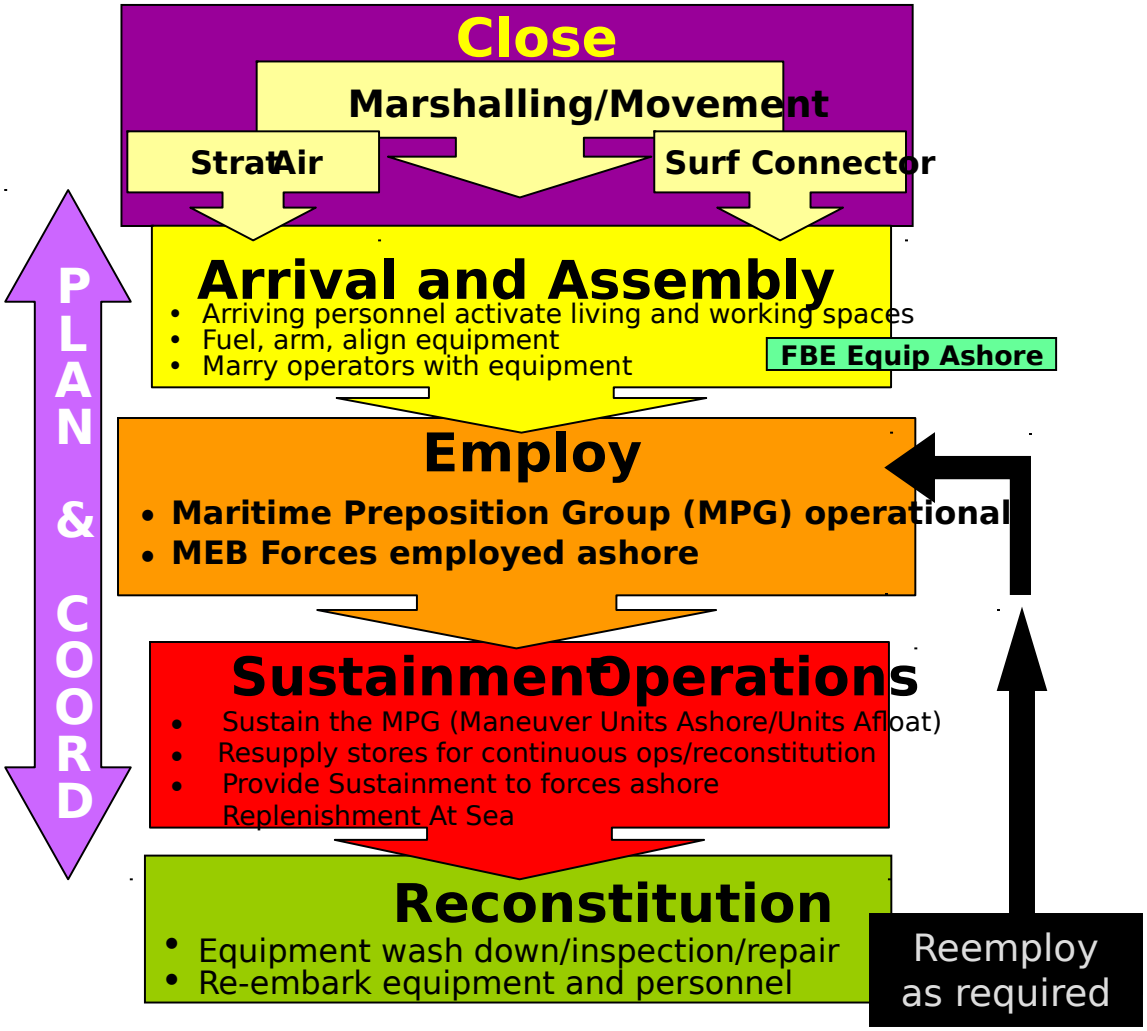
48	MV-22
20	CH-53(X)
18	AH-1
9	UH-1
2	H-60 / Aviation Ship
8	UAVs

<u>Required Squadron Capacity</u>

947,224	RO/RO ft^2
3,001,747	Cargo ft^3
8,808,424	POL ~ gallons
197	CH 46 Equiv
20	Acft operating spots

UNCLASSIFIED

MPF (F) PHASES



SPEED

- **Rapid response: 10-14 days**
- **Leverage forward presence**

ACCESS

- **No Host Nation required**
- **Minimal foot print**
- **Sea as maneuver space**

PERSISTENCE

- **At sea Reconstitution**
- **Continuous sustainment from the sea**
- **Scalable, responsive Joint Power**

UNCLASSIFIED

MPF(F) Squadron Composition

2 T-LHA

NEW BUILD

Length: 844 ft **Beam: 106 ft** **Draft: 28.2 ft** **Displacement: 45K LT**
Per Sqd: 2 **Speed: ~20 knots** **Range~9,500 nm**
Crew: 285 **Stand Det: 23** **MAGTF: 1,490** **NSE: ~590** **Berths: 3, 052**
A/C Stow: 55 **A/C Op Spots: 9** **JP-5: 1.6 Mil gal** **Water: 400k Gal/200K gal Per day**
Sqft: 11,600 **CuFt: 160, 000** **Well Deck: N/A**
TEU: N/A **Med: 2 OR & 24 Beds-4 0R&16/45** **Stern Ramp:**

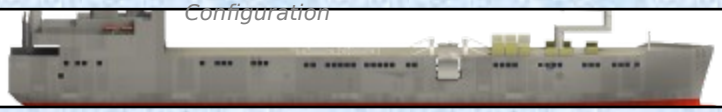
1 T-LHD

NEW BUILD

Length: 844 ft **Beam: 106 ft** **Draft: 27 ft** **Displacement: 42K LT**
Per Sqd: 1 **Speed: ~20 knots** **Range ~9,500 nm**
Crew: 285 **Stand Det: 23** **MAGTF: 1,656** **NSE: ~670** **Berths: 2,946**
A/C Stow: 42 **A/C Op Spots: 9** **JP-5: 607 K gal** **Water:400K Gal/200K Gal Per Day**
Sqft: 24, 012 **CuFt: 145, 000** **Well Deck: 3 LCAC**
TEU: N/A **Med: 6 OR & 60 Beds** **Stern Ramp: 72 ST**

3 T-AKR

NEW BUILD
MODIFIED DESIGN



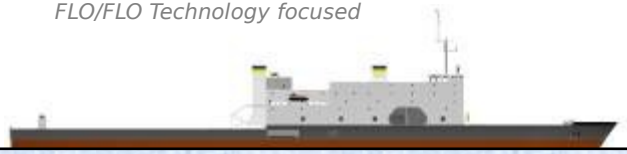
Artist Rendition/Notional Configuration

Length: 950 ft **Beam: 106 ft** **Draft: 34 ft** **Displacement: ~55K LT**
Per Sqd: 3 **Speed: ~20 knots** **Range ~9,500 nm**
Crew: 30 **Stand Det: 48** **MAGTF: 705** **NSE: ~62** **Berths: ~845**
A/C Stow: 0 **A/C Op Spots: 2/4** **JP-5: 380.4K gal** **Water: 33.5K gal/24K gal Per day**
Sqft: 260, 799 **CuFt: 51,682** **Well Deck: N/A**

Artist Rendition/Notional Configuration
FLO/FLO Technology focused

3 MLP

NEW BUILD /DESIGN

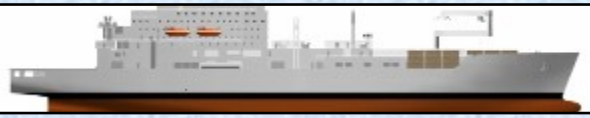


Length: TBD **Beam: TBD** **Draft: TBD** **Displacement: TBD**
Per Sqd: 3 **Speed: ~20 knots** **Range ~9,500 nm**
Crew: 64 **Stand Det: 10** **MAGTF: 594** **NSE: ~128** **Berths: ~1,458**
A/C Stow: 0 **A/C Op Spots: 1** **JP-5:~1.2 Mil gal** **Water:~168K Gal/TBD gal Per day**
Sqft: ~11,253 **CuFt: ~935** **Mission Deck: 6 (LCAC)**
TEU: N/A **Med: Sick Call** **Stern Ramp: N/A**

Artist Rendition/Notional Configuration

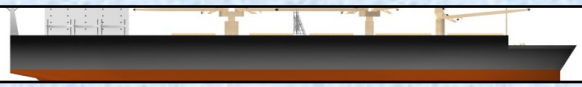
3 T-AKE

NEW BUILD
MODIFIED DESIGN



Length: 689 ft **Beam: 105 ft** **Draft: 29 ft** **Displacement: 39K LT**
Per Sqd: 3 **Speed: ~20 knots** **Range ~9,500 nm**
Crew: 123 **Stand Det: 6** **MAGTF: ~10** **NSE: ~55** **Berths: 197**
A/C Stow: 1 **A/C Op Spots: 1** **JP-5: 1.3 Mil gal** **Water: 52.8K Gal/28K gal Per day**
Sqft: N/A **CuFt: 1,108,592** **Well Deck: N/A**
TEU: 61 **Med: Sick Call** **Stern Ramp: N/A**

2 Legacy

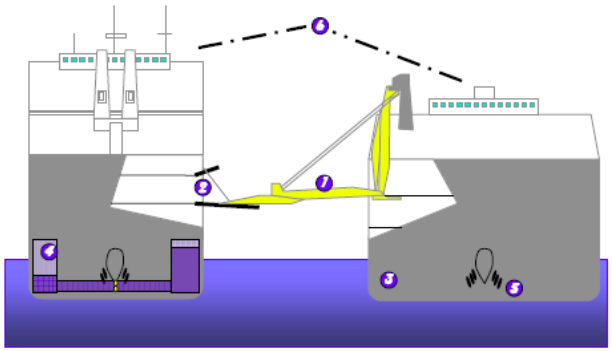


Length: 673 ft **Beam: 106 ft** **Draft: 34.6 ft** **Displacement: ~46K LT**
Per Sqd: 2 **Speed: 17.7 knots** **Range 12,900 nm**
Crew: 30 **Stand Det: 16** **MAGTF: 71** **NSE: ~10** **Berths: 127**
A/C Stow: 0 **A/C Op Spots: 1** **JP-5: 1.4 Mil gal** **Water:99K Gal/ 25K Gal Per day**
Sqft: 152,185 **CuFt: N/A** **Well Deck: N/A**

Vehicle Transfer System (VTS)

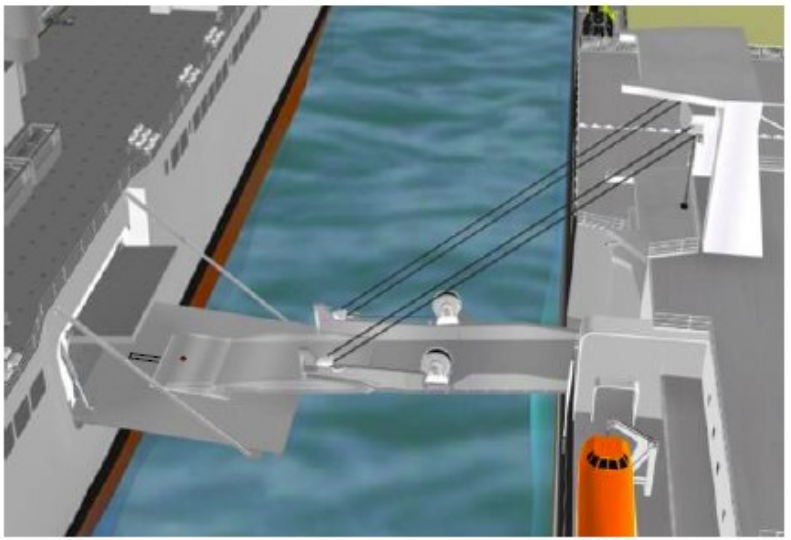
VTS is the critical new technology that enables surface movement

1. MLP Ramp & Door
2. MPFF LMSR Platform & Door
3. MLP Hullform and seakeeping performance
4. MPFF LMSR Anti-roll Solution
5. MLP Dynamic Positioning Capacity
6. Position sensors and Control Algorithm



The MLP Hullform[3], MPF(F) LMSR Anti-Roll Tank[4], MLP Dynamic Positioning System[5] and Position Sensors[6] work together to minimize relative motions in seas

In turn, the MLP Ramp[1] and the MPF(F) LMSR Platform[2] will accommodate these relative motions in seas, in order for vehicles to transfer safely



- **Primary system to transfer vehicles and personnel from the LMSRs to the MLPs underway**
- **Dynamic positioning (DP) of MLP to LMSR while underway**
- **1 VTS per MLP (no redundancy)**
- **24 hour ship transfer (notional) period through NATO SS3**

PMS 325 MPF(F) R&D Program
FY06 At-Sea Test

Alongside operations (also called skin-to-skin) permits the USNS Red Cloud to lower the ramp and transfer vehicles to the Dockwise Mighty Servant 3, for further loading onto LCACs. This simulates the assembly and offload of up to 1/3 of a surface Battalion Landing Team.

Amphib-MPF(F) Approach

Phase I (Complete)

Seabasing MPF(F) Study

MPF(F) Options:

A: Program of Record (POR)

B: POR Less Aviation

C: Recapitalized MPS w/LMSRs

Concerns:

- **Used "How We Fight" brief in mature MCO-3, D+45 & beyond**
- **Option B relied on amphib big decks as surrogates**
- **Study did not examine MPF(F) across full range of military operations**

Phase II (December)

Conduct Follow-On Study by December

- **Alt amphib/MPF(F) aviation mixes**
- **Early MCO employment, LCO's: COIN, HA/DR**
- **Inform decisions on MPF(F) aviation capabilities**

Near-term actions:

- **Draft MLP/T-AKE CDD to R3B 30 Oct**
- **CDD to JROC Jan 08**
- **N85 lead, USMC support**

Decisions

- **Recommended amphib and MPF(F) ship mix**
- **Service Chiefs decide by early 08**
- **Seek SECNAV review and approval**

Joint High Speed Vessel (JHSV)

JHSV Capabilities & Characteristics

- Shallow draft (< 15'), high speed (> 35 kts loaded)
  - Ability to enter small, austere/degraded ports unassisted
- Self-deploying between theaters
- 600-700 ST payload, 1200 NM range, 35 kts, Sea State 3
  - Smaller payloads = greater range, larger payloads = less range
- Seating for 312 Marines (Co (rein)); berthing for 104 Marines
- 20-22,000 sqft mission deck/cargo bay (M1A2, MTVR compatible)
- Slewing ramp (astern to 40 degrees forward)
- Level I, Class 2 flight deck for H-60s, H-46s, UH-/AH-1 helicopters
  - Fuel only, no services
- 20 ST crane for TEU movement, small boat launch & recovery
- Net Ready C4 system (plug and play)
- ***JHSV is not a combatant, operates in a permissive environment***
- ***[illegible] for ATFP capabilities***

JHSV Quantity and Basing

- 8 JHSVs funded (5 Army, 3 Navy), 2 addl USN JHSVs in PR09
- ***Quantity funded does not equal quantity required***
- Acquisition objective TBD by MS B (Aug '08)
  - PACOM, AoA, MCCDC studies suggest 16 JHSVs needed across DOD
- **7 JHSV equivalents meet USMC requirements**
  - Based on MARFOR TSCP, GWOT, intra-theater lift requirements
  - Requirement quantified in "vessel days per year" v. specific # of JHSVs
  - Assumes 180 days operational availability (Ao) per year per JHSV
  - Does not explore overlap between USN, USMC requirements
- Notional basing scheme (JHSVs swing between theaters as needed)
  - PACOM = 3 (Hawaii, Guam, Okinawa)
  - CENTCOM = 2 (Bahrain)
  - EUCOM = 1 (Rota)
  - CONUS = 1 (Norfolk)

Possible JHSV Candidates

Austal 126

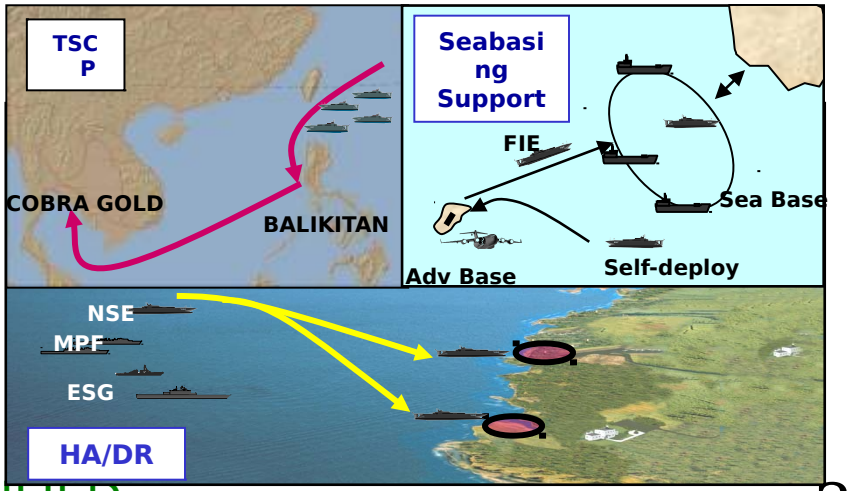
INCAT 112

TSL - 140

Austal 105

MDV-300

USMC JHSV CONOPS (The "Intra-Theater Connector")



Joint Maritime Assault Connector (JMAC)

Capabilities

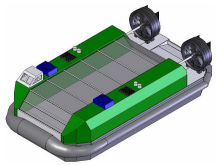
- **High Speed, Over-The-Beach, Ship-To-Shore Amphibious Capability to Lift All Equipment Organic to the Ground Elements of a Marine Air/Ground Task Force**
- **Ability to Operate independent of tides, water depth, underwater obstacles, in NATO SS 3-4 at 25 nm or less**
- **Designed to address 2 gaps:**
  - **Conduct movement**
  - **Prepare for movement**

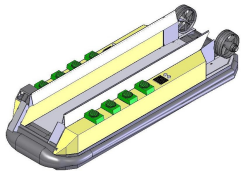
Requirements

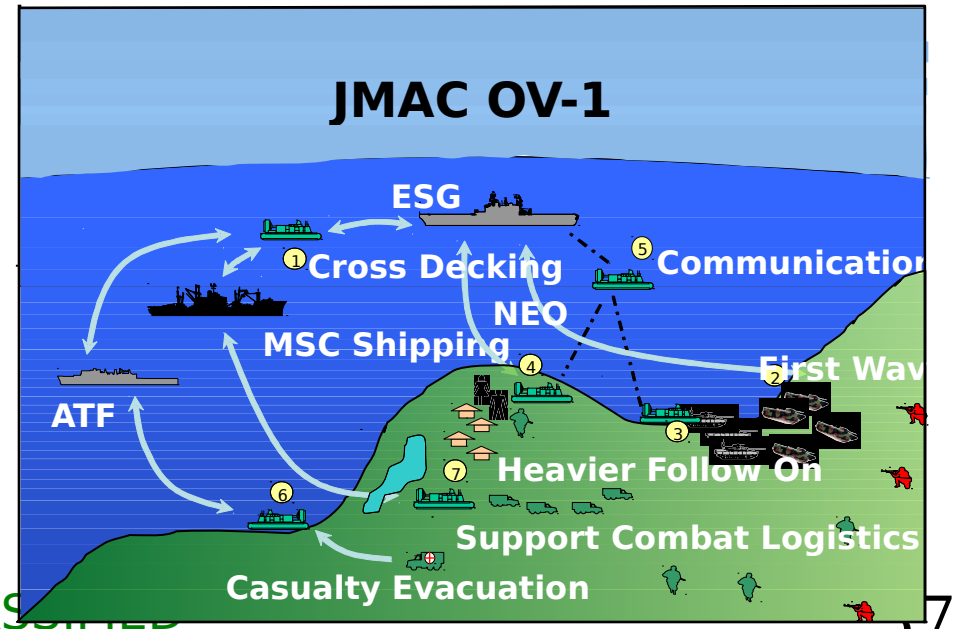
- **2015 timeframe - significant gaps in brigade-sized maneuver concurrent with retirement of the Landing Craft, Air Cushion (LCAC) and Landing Craft, Utility (LCU) as they reach the end of operational service life**
- **72 LCAC required to meet 3.0 MEB and required operational capability/ projected operational environment**
- **72 LCAC required to meet COCOM OPLAN requirement of 60 operational craft**
- **LCAC fleet falls below required 72 LCAC in 2014**

Materiel Alternatives

- **LCAC SLEP**
- **Standard Conventional 73 Short Ton (SC-73)**
- **Large Conventional 146 Short Ton (LC-146))**







Landing Craft Utility (Replacement)

Inventory

- Craft Age
  - Built, 1959-1970
  - Average age, 38
  - West coast craft 2-3 years older than East

- **Craft Inventory - 35**
  - East Coast (NBG2) - 16
  - West Coast (NBG1) - 12
    - FDNF – 4
  - Reserve Detachments
    - New York – 1
    - Florida – 1
  - Explosive Ordnance Group TWO (MDSU) – 1

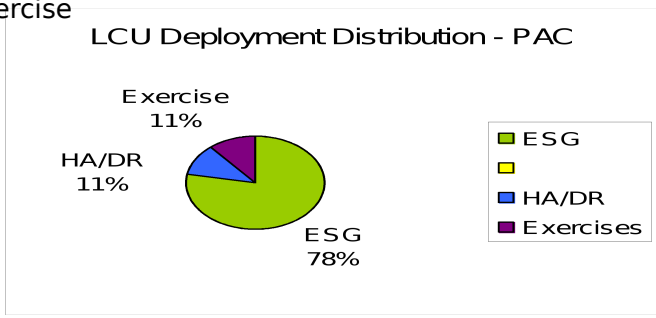
Requirements

- **CNA study in progress to help determine joint USN/USMC requirement for a displacement craft to fill the requirements historically covered by the current LCU**

LCU Activity - PAC

18 LCUs deployed in 36 months (2005-07)

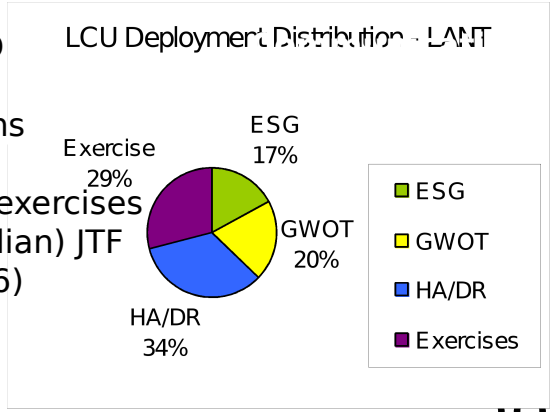
- 14 ISO scheduled ESG deployments
- 2 ISO HA/DR ops
  - Philippines
- 2 ISO multi-national ex
  - 1 RIMPAC Exercise
  - 1 UNITAS



LCU Activity - LANT

41 LCUs deployed in 24 months (2005-07)

- **7 ISO scheduled ESG deployments**
- **8 ISO GWOT Surges**
- **14 ISO HA/DR or NEO**
  - 4 Katrina/Rita
  - 9 Haiti relief operations
  - 1 JTF Lebanon
- 12 ISO multi-national exercises
  - 4 Contingency (Canadian) JTF
  - 3 Panamax (05 and 06)
  - 2 Caribbean Lion (06)
  - 3 EUREX 05



Joint Seabasing Experimentation

Science & Technology and Research & Development

Skin-to-Skin Transfer

High Capacity UNREP

Selective Offload

Stabilized Cranes

Joint Modular Intermodal Container (JMIC)

Mobile Landing Platform Interface

Automated Cargo Handling

At-Sea Arrival, Assembly, Employment, Sustainment

R&D Events

- **Air Skid Testing (9-10, 16-17 Aug 06)**
- **Arrival & Assembly Events (6-19 Sept 06)**
  - Pierside Testing (6-10 Sept 06)
  - At-Anchor Testing (11-13, 19 Sept 06)
  - At-Sea Testing (14-18, 20-21 Sept 06)
    - MLP-LMSR ‘skin-to-skin’ interface
    - MAGTF Vehicle Transfer
    - LCAC onload/offload
    - AAV Launch/Recovery
  - VIP Day 20-21Sept 06
    - (Open water Operational Demo)
  - Industry VIP Day (26-28 Sept 06)

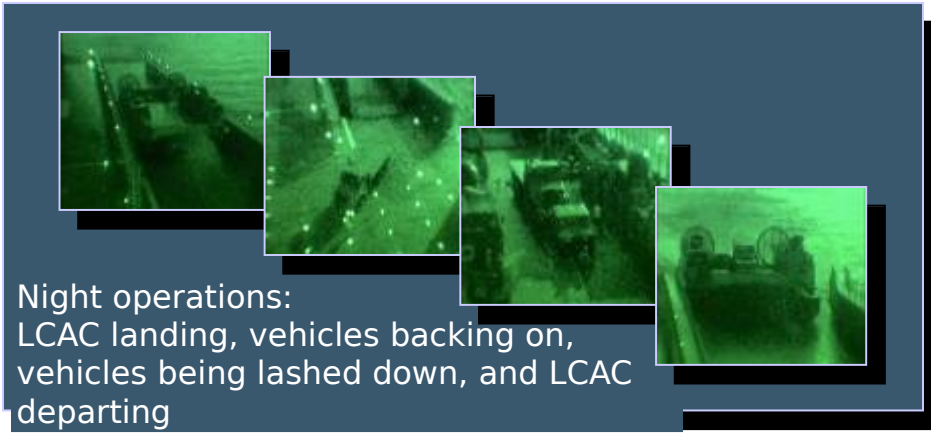
PMS 325 MPF(F) R&D FY06 At-Sea Tests Mooring and Vehicle Transfer

PMS 325 MPF(F) R&D FY06 At-Sea LCAC Operations

LCAC landing on the Mighty Servant 3

Alternate side wall configuration testing

Damaged LCAC recovery te



Night operations:
LCAC landing, vehicles backing on, vehicles being lashed down, and LCAC departing

AC operations were conducted in a variety of sea states, ship headings, ship speeds and an alternate side wall configuration. This information will support the MLP design and operational procedures. LCAC night operations were conducted including vehicle transfer to support the MPF(F) goal of movement of vehicles to the shore in a period of darkness. The feasibility of damaged LCAC recovery was also demonstrated.

PMS 325 MPF(F) R&D FY06
At-Sea Arrival and Assembly Tests

Prepositioned vehicles are assembled as part of the MPF(F) mission. Timing data was collected to support discrete event modeling of assembly area operations. These simulations will be used to support LMSR assembly space sizing, arrangement and procedure development efforts.

Food, water, ammo and fuel for a vehicle is loaded by hand from a pre-mixed pallet.

Vehicles depart assembly

PMS 325 MPF(F) R&D FY06
At-Sea
Vehicle Selective Offload

MTVR Handling

Vehicle maneuvering tests were conducted at pier, anchor and underway with AIR SKIDS and GOJACKS. This capability would improve stow procedures and selective offload capability.

HMMWV on GOJACKS

HMMWV indexing test

Single and Double Air Skids

20 Foot Container Movement

Sea basing Integration Division Points Of Contact

Director

Mr. Jim Strock

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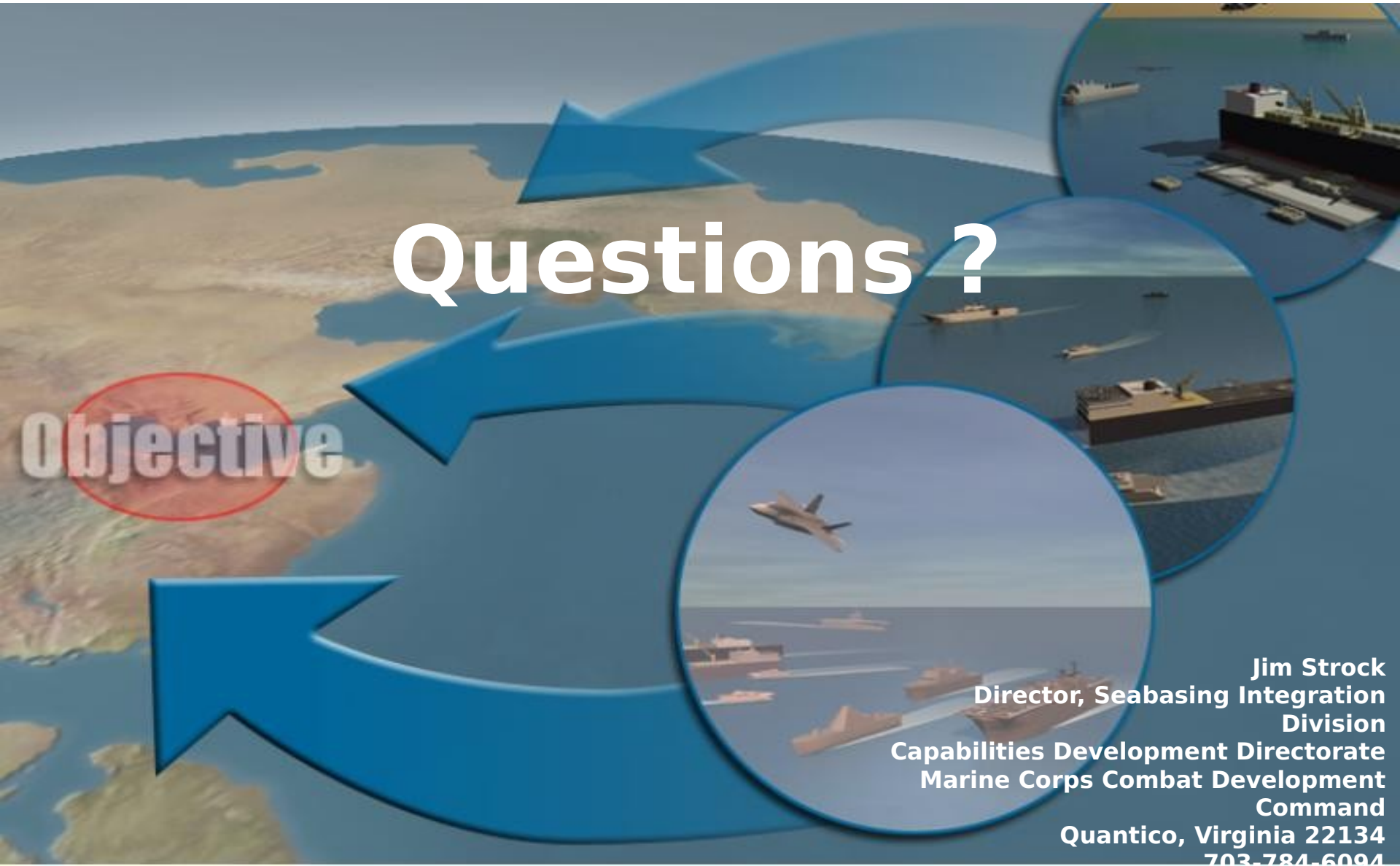
Seabasing

A Joint Force Enabler
In Area-Denial and Anti-Access Envrionments



Questions ?

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Capabilities Development Directorate
Marine Corps Combat Development Command
Quantico, Virginia 22134
703-784-6094

Joint Seabasing
Taking Concepts to Reality

Defense Planning Guidance

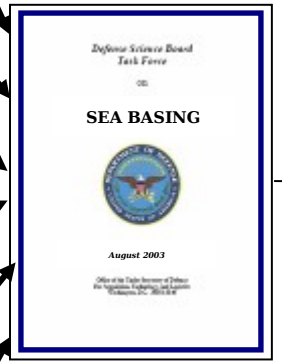
Seapower 21

Expeditionary Maneuver Warfare

Naval Operating Concept

Enhanced Networked Seabasing

QDR 01



DSB Recommendations:

Management
- Joint Sea Base Program Office

Planning
- Sustaining Troops Ashore
- Protecting the Force Ashore
- Countering Threats
- Concepts of Operations

New Capabilities
- Cargo Transfer At Sea
- Long-range, heavy lift aircraft
- Ships
- Communications architecture
- Logistics support system
- Inter-theater lift

Resources
- Development speeds and funding

Seabasing JIC Principles:

Use Sea as Maneuver Space

Leverage Forward Presence and Joint Interdependence

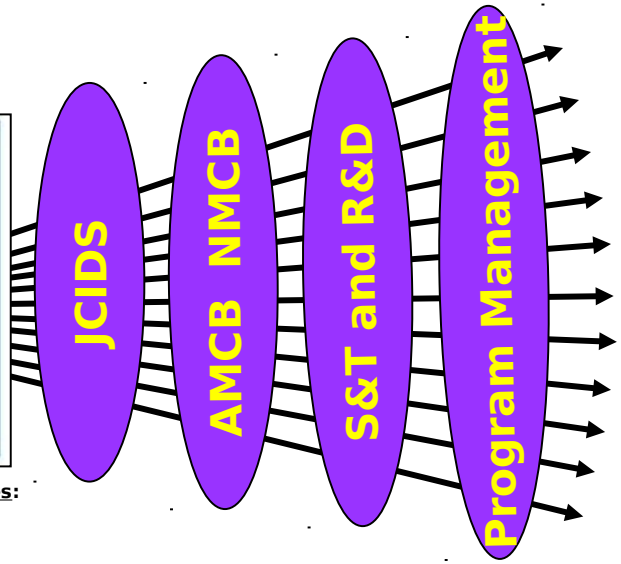
Protect Joint Force Operations

Provide Scalable, Responsive, Joint Power Projection

Sustain Joint Force Operations from the Sea

Expand Access Options and Reduce Dependence on Land Bases

Create Uncertainty for Our Adversaries



ACAT-I Programs:
- Joint High Speed Vessel
- MPF(F)
- LHA(R)
- V-22
- Heavy Lift Replacement

Technological Development:
- Joint High-Speed Sealift
- Joint Heavy Vertical Lift
- Skin-to-Skin Transfer
- Heavy UNREP
- Automated Cargo Handling
- Stabilized Cranes
- Afloat Forward Staging Base
- DLA Afloat Distro Ctr
- Army Supply Support Activity Afloat
- Modular Containers